INTRODUCTION

In exercise of the powers conferred by regulations 57A, 60, 60A, 149 and 202 of the Civil Aviation Regulations 2016, the Director General makes these Director General Directives – Medical Requirement (“Directives”).

These Directives contain the standards, requirements and procedures pertaining to aviation medicine. The standards and requirements in these Directives are based mainly on standards and recommended practices (SARPs) stipulated in International Civil Aviation Organisation (ICAO) Annex 1 to the Chicago Convention – Personnel Licensing.

These Directives are published by the Director General under section 240 of the Civil Aviation Act 1969 [Act 3] and come into force on 3rd April 2017.

Non-compliance with these Directives

Any person who contravenes any provision in these Directives commits an offence and shall on conviction be liable to the punishment under section 240 of the Civil Aviation Act 1969 [Act 3].

(Dato' Sri Azharuddin Abdul Rahman)
Director General of Civil Aviation
3rd April 2017
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1. CITATION

These Director General Directives may be cited as the Director General Directives – Medical Requirement.

2. APPLICATION

The following persons shall be subject to these Directives:

(a) an applicant for a licence granted under regulations 59 and 149 of the MCAR;

(b) a holder of a licence granted under regulations 59 and 149 of the MCAR;

(c) a holder of a flight crew licence granted under the law of any State for the purpose of regulation 63 of the MCAR;

(d) applicants for a course of training for Private Pilot Licence (“PPL”), Multi Pilot Licence (“MPL”), Commercial Pilot Licence (“CPL”) or Airline Transport Pilot Licence (“ATPL”) which will be conducted at the approved training organisation as approved by the Director General (ATO);

(e) a cabin crew member; and

(f) an applicant for a cabin crew attestation.

3. INTERPRETATION

In these Directives –

“Accredited medical conclusion” means the conclusion reached by one or more medical experts acceptable to the DCA, on the basis of objective and non-discriminatory criteria, for the purposes of the case concerned, in consultation with flight operations or other experts as necessary;

“Aircrew” means a holder of a licence and an applicant for a licence granted under regulation 59 of the MCAR;

“Air Traffic Controller” or “ATCO” means a holder of a licence and an applicant for a licence granted under regulation 149 of the MCAR;

“Assessment” means the conclusion on the medical fitness of a person based on the evaluation of the person’s medical history and/or aero-medical examinations as required in these Directives and further examinations as necessary, and/or medical tests such as, but not limited to, ECG, blood pressure measurement, blood testing, X-ray and/or specialist’s reports;
“Colour safe” means the ability of an applicant to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights;

“Examination” means an inspection, palpation, percussion, auscultation or other means of investigation especially for assessment of fitness;

“Investigation” means the assessment of a suspected pathological condition of an applicant by means of examinations, tests and/or specialists reports in order to verify the presence or absence of a medical condition;

“Limitation” means a condition placed on the medical certificate or license that shall be complied with whilst exercising the privileges of the license;

“MCAR” means Civil Aviation Regulations 2016;

“Medical examiner” or “ME” means a physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is approved by the Director General to conduct medical examination for fitness of applicant or a holder of a licence for which medical requirement are prescribed; and

“Refractive error” means the deviation from emmetropia measured in dioptres in the most ametropic meridian, measured by standard methods.

4. **REVOCATION**

The Flight Operations Directive – Medical [10ME-16], Issue 2 is revoked.
PART A

GENERAL REQUIREMENTS

SECTION 1 – General

MED.A.001 General

(a) Medical examiner shall have the power to –
   (1) perform medical examinations for fitness of a person who is subjected to these Directives;
   (2) issue a medical certificate to the effect that such person who is subjected to these Directives meets the requirements specified in respect of the medical certificate; and
   (3) upon an occasion as the Director General requires, conduct medical examination even if a valid medical certificate has been granted by the medical examiner.

(b) ME shall perform medical examination at the place which has been determined by the Director General.

(c) The Director General may approve an appropriately qualified and registered medical practitioner as ME in a foreign country.

(d) The Director General may designate among the ME, a Chief Medical Assessor (“CMA”) who shall have the power to –
   (1) review and attest the finding of the medical examination and/or Medical Certificate;
   (2) in deferred, doubtful medical fitness or in cases of an aircrew or ATCO with compromised medical fitness, convene the DCA Medical Board; and
   (3) any other powers as may be determined by the Director General.

(e) General medical practitioners (“GMP”) shall have the power to –
   (1) perform medical examinations for fitness of a cabin crew member and an applicant for a cabin crew attestation; and
   (2) issue a medical certificate to the effect that the cabin crew member and the applicant for a cabin crew attestation meets the requirements specified in respect of the medical certificate.

MED.A.015 Medical confidentiality

(a) All persons involved in medical examination, assessment and certification shall ensure that medical confidentiality is respected at all times.

(b) However, where aviation safety in air operation is adversely affected by air
crew and/or cabin crew member and/or ATCO medical or psychological ailment, public safety shall take priority over medical confidentiality.

**MED.A.020 Decrease in medical fitness**

(a) Under regulations 62 and 155 of the MCAR, an aircrew and ATCO, respectively who –

(1) suffers any personal injury involving incapacity to undertake the function to which the licence relates;

(2) suffers any illness involving incapacity to undertake those functions throughout the period of more than twenty-one (21) days;

(3) knows or has reason to believe that she is pregnant;

(4) requires continued treatment with any medical prescription; or

(5) has received medical treatment requiring hospitalization,

shall—

(i) as soon as possible inform the Director General in writing of the injury, illness, pregnancy or treatment or as soon as possible after the period of twenty-one (21) days has elapsed in the case of the illness referred to in subparagraph (2); and

(ii) not exercise the privileges of the licence and ratings until he has satisfied the medical examiner that his medical fitness has been restored to the standard as specified in these Directives.

(b) For the purpose of subparagraph (a)(ii), the CMA or ME shall assess the medical fitness of an aircrew and ATCO and decide whether they are fit to resume his privileges under the license with or without limitations.

**MED.A.025 Obligations of CMA and ME**

(a) When conducting aero-medical examinations and/or assessments, ME’s shall:

(1) ensure that communication with the person can be established without language barriers; and

(2) make the person aware of the consequences of providing incomplete, inaccurate or false statements on their medical history.

(b) After completion of the aero-medical examinations and/or assessment, the ME shall:

(1) advise the person whether fit, unfit or referred to DCA or other ME;

(2) inform the person of any limitation that may restrict flight training or the privileges of the license or cabin crew attestation, as applicable;

(3) if the person has been assessed as unfit, inform him of his right of a
secondary review; and

(4) if the person is found fit, issue the medical certificate to the person and submit without delay a signed report including the assessment result to DCA.

(c) CMA and MEs shall maintain records with details of medical examinations and assessments performed in accordance with these Directives.

(d) When required especially in the case of doubt, medical certification should be deferred. MEs, shall submit the completed medical forms and medical records/reports with his comments to the CMA.

SECTION 2 – Requirements for Medical Certificates

MED.A.030 Medical certificates

(a) A student pilot shall not fly unless that student pilot holds a medical certificate, as required for the relevant license.

(b) Applicants for and holders of a private pilot license ("PPL"), or a balloon pilot license ("BPL") shall hold at least a Class 2 medical certificate.

(d) Applicants for and holders of a BPL involved in commercial balloon flights shall hold at least a Class 2 medical certificate.

(e) If a night rating is added to a PPL, the license holder shall be colour safe.

(f) Applicants for and holders of a commercial pilot license ("CPL"), a multi-crew pilot license ("MPL"), or an airline transport pilot license ("ATPL") shall hold a Class 1 medical certificate.

(g) ATCO shall hold a Class 3 medical certificate.

(h) An aircrew and ATCO shall not at any time hold more than one medical certificate issued in accordance with these Directives.

MED.A.035 Application for a medical certificate

(a) Applications for a medical certificate shall be made in a format established by the DCA.

(b) Applicants for a medical certificate shall provide the ME:

(1) proof of their identity;

(2) a signed declaration:

(i) of medical facts concerning their medical history, family history and social history;

(ii) as to whether they have previously undergone an examination for
a medical certificate and, if so, by whom and with what result; and

(iii) as to whether they have ever been assessed as unfit or had a medical certificate suspended or revoked.

(c) A holder of a licence granted under regulations 59 and 149 of the MCAR shall present the current medical certificate to the ME.

MED.A.040 Issue, revalidation and renewal of medical certificates

(a) A medical certificate shall only be issued, revalidated or renewed once the required medical examinations and/or assessments have been completed and a fit assessment is made.

(b) Initial issue:
Class 1, Class 2 and Class 3 medical certificates shall be issued by a ME and in the case of doubt, by a CMA.

(c) Revalidation and renewal:
Class 1, Class 2 and Class 3 medical certificates shall be revalidated or renewed by a ME and in the case of doubt, by a CMA.

(d) The ME shall only issue, revalidate or renew a medical certificate if:
(1) the applicant has provided them with a complete medical history and, if required by the ME, results of medical examinations and tests conducted by the applicant’s doctor or any medical specialists; and

(2) the ME have conducted the aero-medical assessment based on the medical examinations and tests as required for the relevant medical certificate to verify that the applicant complies with all the relevant requirements of these Directives.

(e) The ME, in the case of deferral, may require the applicant to undergo additional medical examinations and investigations when clinically indicated before they issue, revalidate or renew a medical certificate. Such deferral shall be notified to DCA.

(f) Classes of Medical Assessment. Three classes as follows:
(1) Class 1 Medical Assessment which is applicable to applicants for, and holders of:
   (i) CPL (aeroplane, airship, helicopter and powered-lift);

   (ii) MPL (aeroplane); and

   (iii) ATPL (aeroplane, helicopter and powered-lift).

(2) Class 2 Medical Assessment which is applicable to applicants for, and holders of:
   (i) flight navigator license;
(ii) flight engineer license;

(iii) PPL (aeroplane, airship, helicopter and powered-lift); and

(iv) BPL.

(3) Class 3 Medical Assessment which is applicable to ATCO. An applicant for an air traffic controller license shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

MED.A.045 Validity, revalidation and renewal of medical certificates

(a) Validity

(1) Class 1 medical certificates shall be valid for a period of 12 months.

(2) Notwithstanding paragraph (1), Class 1 medical certificates shall be valid for a period of 6 months in the case of the respective aircrew who:

(i) is of the age of 60 or above on the date the medical certificate is issued or on the expiry date of his previous medical certificate, as the case may be; or

(ii) are engaged in single-pilot commercial air transport operations carrying passengers and have reached the age of 40.

(3) Class 2 medical certificates shall be valid for a period of:

(i) in the case of the respective aircrew who is of the age of between 40 years and 1 day and below the age of 50 years and 1 day on the date the medical certificate is issued or on the expiry date of his previous medical certificate, as the case may be, 24 months. A medical certificate which is issued preceding the age of 50 years and 1 day shall be valid until the respective aircrew reaches the age of 51 years; and

(ii) in the case of the respective aircrew who is of the age of 50 years and 1 day or above on the date the medical certificate is issued or on the expiry date of his previous medical certificate, as the case may be, 12 months.

(4) Class 3 medical certificates shall be valid for a period of:

(i) in the case of the ATCO who is below the age of 40 years and 1 day on the date the medical certificate is issued or on the expiry date of his previous medical certificate, as the case may be, 48 months. A medical certificate which is issued preceding the age of 40 years and 1 day shall be valid until the ATCO reaches the age of 42 years; and

(ii) in the case of the ATCO who is of the age of 40 years and 1 day or above on the date the medical certificate is issued or on the expiry date of his previous medical certificate, as the case may be, 24 months.
The validity period of a medical certificate for any other licenses are as follows:

(i) 60 months for the BPL;

(ii) 60 months for the PPL (aeroplane, airship, helicopter and powered-lift);

(iii) 24 months for the Student Pilot Licence (“SPL”);

(iv) 12 months for the CPL (aeroplane, airship, helicopter and powered-lift);

(v) 12 months for the MPL (aeroplane);

(vi) 12 months for the ATPL (aeroplane, helicopter and powered-lift);

(vii) 12 months for the flight navigator license; and

(viii) 12 months for the flight engineer license.

(b) Revalidation
Examinations and/or assessments for the revalidation of a medical certificate may be undertaken up to 45 days prior to the expiry date of the medical certificate.

(c) Renewal
(1) If the holder of a medical certificate does not comply with paragraph (b) above, a renewal examination and/or assessment shall be required.

(2) In the case of Class 1, Class 2 and Class 3 medical certificates:
   (i) if the medical certificate has expired for more than 2 years, the ME shall only conduct the renewal examination after assessment of the aero-medical records of the applicant; and

   (ii) if the medical certificate has expired for more than 5 years, the examination requirements for initial issue shall apply and the assessment shall be based on the revalidation requirements.

MED.A.050 Referral
(a) If an applicant for a Class 1 or Class 2 or Class 3 medical certificate is referred to the DCA in accordance with MED.B.001 of these Directives, the ME shall transfer the relevant medical documentation to the DCA.
PART B

MEDICAL CERTIFICATE REQUIREMENTS FOR AIRCREW AND ATCO

SECTION 1 – General

MED.B.001 Limitations to medical certificates

(a) Limitations to Class 1, Class 2 and Class 3 medical certificates:

(1) If the applicant does not fully comply with the requirements for the relevant class of medical certificate but is considered to be not likely to jeopardise flight safety, the ME shall:

(i) in the case of applicants for a Class 1 medical certificate, refer the decision on fitness of the applicant to the DCA as indicated in this Part;

(ii) in cases where a referral to the DCA is not indicated in this Subpart, evaluate whether the applicant is able to perform his duties safely when complying with one or more limitations endorsed on the medical certificate, and issue the medical certificate with limitation(s) as necessary, in consultation with the DCA;

(iii) in the case of applicants for a Class 2 medical certificate, evaluate whether the applicant is able to perform his duties safely when complying with one or more limitations endorsed on the medical certificate, and issue the medical certificate, as necessary with limitation(s), in consultation with the DCA;

(iv) in the case of applicants for a Class 3 medical certificate, evaluate whether the applicant is able to perform his duties safely when complying with one or more limitations endorsed on the medical certificate, and issue the medical certificate, as necessary with limitation(s), in consultation with the DCA; and

(v) the ME may revalidate or renew a medical certificate with the same limitation without referring the applicant to the DCA.

(b) When assessing whether a limitation is necessary, particular consideration shall be given to:

(1) whether accredited medical conclusion indicates that in special circumstances the applicant’s failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the license applied for is not likely to jeopardise flight safety; and

(2) the applicant’s ability, skill and experience relevant to the operation to be performed.

(c) Operational limitation codes

(1) Operational multi-pilot limitation (“OML”) (OML — Class 1 only)
(i) When the holder of a CPL, ATPL or MPL does not fully meet the requirements for a Class 1 medical certificate and has been referred to the DCA, it shall be assessed whether the medical certificate may be issued with an OML ‘valid only as or with qualified co-pilot’. This assessment shall be performed by the DCA.

(ii) The holder of a medical certificate with an OML shall only operate an aircraft in multi-pilot operations when the other pilot is fully qualified on the relevant type of aircraft, is not subject to an OML and has not attained the age of 60 years.

(iii) The OML for Class 1 medical certificates may only be imposed and removed by the DCA.

(2) Operational Safety Pilot Limitation (“OSL”) (OSL — Class 2 privileges)

(i) The holder of a medical certificate with an OSL limitation shall only operate an aircraft if another pilot fully qualified to act as pilot-in-command (“PIC”) on the relevant class or type of aircraft is carried on board, the aircraft is fitted with dual controls and the other pilot occupies a seat at the controls.

(ii) The OSL for Class 2 medical certificates may be imposed or removed by a ME in consultation with the DCA.

(3) Operational Passenger Limitation (“OPL”) (OPL — Class 2 privileges)

(i) The holder of a medical certificate with an OPL limitation shall only operate an aircraft without passengers on board.

(ii) An OPL for any class of medical certificates has to be imposed by DCA.

(iii) Any other limitation may be imposed on the holder of a medical certificate if required to ensure flight safety.

(iv) Any limitation imposed on the holder of a medical certificate shall be specified therein.

SECTION 2 – Medical requirements for Class 1, Class 2 and Class 3 Medical Certificates

MED.B.005 General

(a) Applicants for a medical certificate shall be free from any:

(1) abnormality, congenital or acquired;

(2) active, latent, acute or chronic disease or disability;

(3) wound, injury or sequelae from operation;
(4) effect or side effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken; that would entail a degree of functional incapacity which is likely to interfere with the safe exercise of the privileges of the applicable license or could render the applicant likely to become suddenly unable to exercise the privileges of the license safely.

(b) In cases where the decision on medical fitness of an applicant for a Class 1 medical certificate is referred to the DCA, the DCA may delegate such a decision to CMA, except in cases where an OML is needed.

(c) In cases where the decision on medical fitness of an applicant for a Class 2 medical certificate is referred to the DCA, the DCA may delegate such a decision to CMA or a ME, except in cases where an OSL or OPL is needed.

(d) In cases where the decision on medical fitness of an applicant for a Class 3 medical certificate is referred to the DCA, the DCA may delegate such a decision to CMA or a ME.

**MED.B.006 Type of special examinations for Class 3 medical certificate**

For Class 3 medical certificate, the frequencies and types of special examination are as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Initial Medical</th>
<th>Below the age of 40 years and 1 day</th>
<th>Between the age of 40 years and 1 day and below the age of 50 years and 1 day</th>
<th>Age of 50 years and 1 day or above</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG</td>
<td>Yes</td>
<td>Every 5 years</td>
<td>Annually</td>
<td></td>
</tr>
<tr>
<td>Audiogram</td>
<td>Yes</td>
<td>Every 5 years</td>
<td>Every 2 years</td>
<td></td>
</tr>
<tr>
<td>Chest X-ray</td>
<td>Yes</td>
<td>Every 5 years or if clinically indicated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipid Profile</td>
<td>Yes</td>
<td>Every 5 years or if clinically indicated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>Yes</td>
<td>Every 5 years</td>
<td>Every 2 years</td>
<td></td>
</tr>
</tbody>
</table>

**MED.B.010 Cardiovascular System**

(a) Examination

(1) A standard 12-lead resting electrocardiogram (ECG) and report shall be completed on clinical indication, and:

(i) for a Class 1 medical certificate, at the examination for the first issue of a medical certificate, every 5 years until age 30 years, every 2 years until age 40 years, annually until age 50 years, and at all revalidation or renewal examinations thereafter;

(ii) for a Class 2 medical certificate, at the examination for the first issue of a medical certificate, age 40 years, age 45 years and every
2 years after age 50 years.

(iii) for a Class 3 medical certificate, at the examination for the first issue of a medical certificate, every 5 years until age 50 years and annually thereafter.

(2) Extended cardiovascular assessment shall be required when clinically indicated.

(3) For a Class 1 medical certificate, an extended cardiovascular assessment shall be completed at the first revalidation or renewal examination after age 60 and every 4 years thereafter.

(4) For a Class 1 medical certificate, estimation of serum lipids, including cholesterol unless clinically indicated, shall be required at the examination for the first issue of a medical certificate, and at the first examination after having reached the age of 40.

(b) Cardiovascular System — General

(1) Applicants shall not suffer from any cardiovascular disorder which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(2) Applicants for a Class 1 medical certificate with any of the following conditions shall be assessed as unfit:
   (i) aneurysm of the thoracic or supra-renal abdominal aorta, before or after surgery;
   
   (ii) significant functional abnormality of any of the heart valves; and
   
   (iii) heart or heart/lung transplantation.

(3) Applicants for a Class 1 medical certificate with an established history or diagnosis of any of the following conditions shall be referred to the DCA:
   (i) peripheral arterial disease before or after surgery;
   
   (ii) aneurysm of the abdominal aorta, before or after surgery;
   
   (iii) functionally insignificant cardiac valvular abnormalities;
   
   (iv) after cardiac valve surgery;
   
   (v) abnormality of the pericardium, myocardium or endocardium;
   
   (vi) congenital abnormality of the heart, before or after corrective surgery;
   
   (vii) recurrent vasovagal syncope;
(viii) arterial or venous thrombosis;

(ix) pulmonary embolism; and

(x) cardiovascular condition requiring systemic anticoagulant therapy.

(4) Applicants for a Class 2 or Class 3 medical certificate with an established diagnosis of one of the conditions specified in paragraph (2) and (3) above shall be assessed by a cardiologist before a fit assessment can be considered in consultation with the DCA.

(c) Blood Pressure

(1) The blood pressure shall be recorded at each examination.

(2) The applicant’s blood pressure shall be within normal limits.

(3) Applicants for a Class 1, Class 2 or Class 3 medical certificate:
   (i) with symptomatic hypotension; or
   (ii) whose blood pressure at examination consistently exceeds 160 mmHg systolic and/or 95 mmHg diastolic, with or without treatment;

   shall be assessed as unfit.

(4) The initiation of medication for the control of blood pressure shall require a period of temporary suspension 2 to 4 weeks of the medical certificate to establish the absence of significant side effects.

(d) Coronary Artery Disease

(1) Applicants for a Class 1 medical certificate with:
   (i) suspected myocardial ischaemia;
   (ii) asymptomatic minor coronary artery disease requiring no anti-anginal treatment; shall be referred to the DCA and undergo cardiological evaluation to exclude myocardial ischaemia before a fit assessment can be considered.

(2) Applicants for a Class 2 or Class 3 medical certificate with any of the conditions detailed in paragraph (1) above shall undergo cardiological evaluation before a fit assessment can be considered.

(3) Applicants with any of the following conditions shall be assessed as unfit:
   (i) myocardial ischaemia;
   (ii) symptomatic coronary artery disease; and
   (iii) symptoms of coronary artery disease controlled by medication.
(4) Applicants for the initial issue of a Class 1 medical certificate with a history or diagnosis of any of the following conditions shall be assessed as unfit:
(i) myocardial ischaemia;
(ii) myocardial infarction; and
(iii) revascularisation for coronary artery disease.

(5) Applicants for a Class 2 or Class 3 medical certificate who are asymptomatic following myocardial infarction or surgery for coronary artery disease shall undergo satisfactory cardiological evaluation before a fit assessment can be considered in consultation with the DCA. Applicants for the revalidation of a Class 1 medical certificate shall be referred to the DCA.

(e) Rhythm/Conduction Disturbances
(1) Applicants for a Class 1 medical certificate shall be referred to the DCA when they have any significant disturbance of cardiac conduction or rhythm, including any of the following:
(i) disturbance of supraventricular rhythm, including intermittent or established sinoatrial dysfunction, atrial fibrillation and/or flutter and asymptomatic sinus pauses;
(ii) complete left bundle branch block;
(iii) Mobitz type 2 atrioventricular block;
(iv) broad and/or narrow complex tachycardia;
(v) ventricular pre-excitation;
(vi) asymptomatic QT prolongation; and
(vii) Brugada pattern on electrocardiography.

(2) Applicants for a Class 2 or Class 3 medical certificate with any of the conditions detailed in paragraph (1) above shall undergo satisfactory cardiological evaluation before a fit assessment in consultation with the DCA can be considered.

(3) Applicants with any of the following:
(i) incomplete bundle branch block;
(ii) complete right bundle branch block;
(iii) stable left axis deviation;
(iv) asymptomatic sinus bradycardia;
(v) asymptomatic sinus tachycardia;

(vi) asymptomatic isolated uniform supra-ventricular or ventricular ectopic complexes;

(vii) first degree atrioventricular block; and

(viii) Mobitz type 1 atrioventricular block; may be assessed as fit in the absence of any other abnormality and subject to satisfactory cardiological evaluation.

(4) Applicants with a history of:
   (i) ablation therapy; and
   (ii) pacemaker implantation;

shall undergo satisfactory cardiovascular evaluation before a fit assessment can be considered. Applicants for a Class 1 medical certificate shall be referred to the DCA. Applicants for a Class 2 medical certificate shall be assessed in consultation with the DCA.

(5) Applicants with any of the following conditions shall be assessed as unfit:
   (i) symptomatic sinoatrial disease;
   (ii) complete atrioventricular block;
   (iii) symptomatic QT prolongation;
   (iv) an automatic implantable defibrillating system; and
   (v) a ventricular anti-tachycardia pacemaker.

MED.B.015 Respiratory System

(a) Applicants with significant impairment of pulmonary function shall be assessed as unfit. A fit assessment may be considered once pulmonary function has recovered and is satisfactory.

(b) For a Class 1 medical certificate, applicants are required to undertake pulmonary function tests at the initial examination and on clinical indication.

(c) For a Class 2 or Class 3 medical certificate, applicants are required to undertake pulmonary function tests on clinical indication.

(d) Applicants with a history or established diagnosis of:
   (1) asthma requiring medication;
   (2) active inflammatory disease of the respiratory system;
(3) active sarcoidosis;
(4) pneumothorax;
(5) sleep apnoea syndrome;
(6) major thoracic surgery; and
(7) pneumonectomy;

shall undergo respiratory evaluation with a satisfactory result before a fit assessment can be considered. Applicants with an established diagnosis of the conditions specified in paragraph (3) and (5) above shall undergo satisfactory cardiological evaluation before a fit assessment can be considered.

(e) Aero-medical assessment:
(1) applicants for a Class 1 medical certificate with any of the conditions detailed in paragraph (d) above shall be referred to the DCA; and
(2) applicants for a Class 2 or Class 3 medical certificate with any of the conditions detailed in paragraph (d) above shall be assessed in consultation with the DCA.

(f) Applicants for a Class 1 medical certificate who have undergone a total pneumonectomy shall be assessed as unfit.

MED.B.020 Digestive System
(a) Applicants shall not possess any functional or structural disease of the gastro-intestinal tract or its adnexa which is likely to interfere with the safe exercise of the privileges of the applicable licence(s).

(b) Applicants with any sequelae of disease or surgical intervention in any part of the digestive tract or its adnexa likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression shall be assessed as unfit.

(c) Applicants shall be free from herniae that might give rise to incapacitating symptoms.

(d) Applicants with disorders of the gastro-intestinal system including:
(1) recurrent dyspeptic disorder requiring medication;
(2) pancreatitis;
(3) symptomatic gallstones;
(4) an established diagnosis or history of chronic inflammatory bowel disease; and
(5) after surgical operation on the digestive tract or its adnexa, including surgery involving total or partial excision or a diversion of any of these organs; shall be assessed as unfit. A fit assessment may be considered after successful treatment or full recovery after surgery and subject to satisfactory gastroenterological evaluation.

(e) Aero-medical assessment:
   (1) applicants for a Class 1 medical certificate with the diagnosis of the conditions specified in paragraph (d)(2), (d)(4) and (d)(5) above shall be referred to the DCA; and
   (2) fitness of Class 2 or Class 3 applicants with pancreatitis shall be assessed in consultation with the DCA.

MED.B.025 Metabolic and Endocrine Systems
(a) Applicants shall not possess any functional or structural metabolic, nutritional or endocrine disorder which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Applicants with metabolic, nutritional or endocrine dysfunction may be assessed as fit subject to demonstrated stability of the condition and satisfactory aero-medical evaluation.

(c) Diabetes mellitus
   (1) Applicants with diabetes mellitus requiring insulin shall be assessed as unfit.

   (2) Applicants with diabetes mellitus not requiring insulin shall be assessed as unfit unless it can be demonstrated that blood sugar control has been achieved.

(d) Aero-medical assessment:
   (1) applicants for a Class 1 medical certificate requiring medication other than insulin for blood sugar control shall be referred to the DCA; and

   (2) fitness of Class 2 or Class 3 applicants requiring medication other than insulin for blood sugar control shall be assessed in consultation with the DCA.

MED.B.030 Haematology
(a) Applicants shall not possess any haematological disease which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) For a Class 1 medical certificate, haemoglobin shall be tested at each examination for the issue of a medical certificate.

(c) Applicants with a haematological condition, such as:
   (1) coagulation, haemorrhagic or thrombotic disorder; and
(2) chronic leukaemia; may be assessed as fit subject to satisfactory aeromedical evaluation.

(d) Aero-medical assessment:
(1) applicants for a Class 1, medical certificate with one of the conditions specified in paragraph (c) above shall be referred to the DCA; and
(2) fitness of Class 2 or Class 3 applicants with one of the conditions specified in paragraph (c) above shall be assessed in consultation with the DCA.

(e) Class 1 applicants with one of the haematological conditions specified below shall be referred to the DCA:
(1) abnormal haemoglobin, including, but not limited to anaemia, polycythaemia or haemoglobinopathy;
(2) significant lymphatic enlargement; and
(3) enlargement of the spleen.

MED.B.035 Genitourinary System
(a) Applicants shall not possess any functional or structural disease of the renal or genito-urinary system or its adnexa which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Urinalysis shall form part of every aero-medical examination. The urine shall contain no abnormal element considered to be of pathological significance.

(c) Applicants with any sequela of disease or surgical procedures on the kidneys or the urinary tract likely to cause incapacitation, in particular any obstruction due to stricture or compression shall be assessed as unfit.

(d) Applicants with a genitourinary disorder, such as:
(1) renal disease; and
(2) one or more urinary calculi, or a history of renal colic; may be assessed as fit subject to satisfactory renal/urological evaluation.

(e) Applicants who have undergone a major surgical operation in the urinary apparatus involving a total or partial excision or a diversion of its organs shall be assessed as unfit and be re-assessed after full recovery before a fit assessment can be considered. Applicants for a Class 1, Class 2 and Class 3 medical certificate shall be referred to the DCA for the re-assessment.

MED.B.040 Infectious Disease
(a) Applicants shall have no established medical history or clinical diagnosis of any infectious disease which is likely to interfere with the safe exercise of the privileges of the applicable license held.
(b) Applicants who are HIV positive may be assessed as fit subject to satisfactory aero-medical evaluation. Applicants for a Class 1, Class 2 and Class 3 medical certificate shall be referred to the DCA.

MED.B.045 Obstetrics and Gynaecology
(a) Applicants shall not possess any functional or structural obstetric or gynaecological condition which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Applicants who have undergone a major gynaecological operation shall be assessed as unfit until full recovery.

(c) Pregnancy
(1) License holder not to act as member of flight crew once she knows or has reason to believe that she is pregnant.

(2) For Class 3 applicants with a low-risk uncomplicated pregnancy, evaluated fit assessment should be limited to the period until the end of the 34th week of gestation.

(3) During the gestational period, precautions should be taken for the timely relief of an ATCO in the event of early onset of labour or other complications.

(4) Following confinement or termination of pregnancy the applicant shall not be permitted to exercise the privileges of her license until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

MED.B.050 Musculoskeletal System
(a) Applicants shall not possess any abnormality of the bones, joints, muscles or tendons, congenital or acquired which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) An applicant shall have sufficient sitting height, arm and leg length and muscular strength for the safe exercise of the privileges of the applicable license(s).

(c) An applicant shall have satisfactory functional use of the musculoskeletal system to enable the safe exercise of the privileges of the applicable license(s). Fitness of the applicants shall be assessed in consultation with the DCA.

MED.B.055 Psychiatry
(a) Applicants shall have no established medical history or clinical diagnosis of any psychiatric disease or disability, condition or disorder, acute or chronic, congenital or acquired, which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Applicants with a mental or behavioural disorder due to alcohol or other use or
abuse of psychotropic substances shall be assessed as unfit pending recovery and freedom from substance use and subject to satisfactory psychiatric evaluation after successful treatment. Applicants for a Class 1 medical certificate shall be referred to the DCA. Fitness of Class 2 or Class 3 applicants shall be assessed in consultation with the DCA.

(c) Applicants with a psychiatric condition such as:

(1) mood disorder;

(2) neurotic disorder;

(3) personality disorder; and

(4) mental or behavioural disorder; shall undergo satisfactory psychiatric evaluation before a fit assessment can be made.

(d) Applicants with a history of a single or repeated acts of deliberate self-harm shall be assessed as unfit. Applicants shall undergo satisfactory psychiatric evaluation before a fit assessment can be considered.

(e) Aero-medical assessment:

(1) applicants for a Class 1 medical certificate with one of the conditions detailed in paragraph (b), (c) or (d) above shall be referred to the DCA; and

(2) fitness of Class 2 or Class 3 applicants with one of the conditions detailed in paragraph (b), (c) or (d) above shall be assessed in consultation with the DCA.

(f) Applicants with an established history or clinical diagnosis of schizophrenia, schizotypal or delusional disorder shall be assessed as unfit.

MED.B.060 Psychology

(a) Applicants shall have no established psychological deficiencies, which are likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) A psychological evaluation may be required as part of, or complementary to, a specialist psychiatric or neurological examination.

MED.B.065 Neurology

(a) Applicants shall have no established medical history or clinical diagnosis of any neurological condition which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Applicants with an established history or clinical diagnosis of:

(1) epilepsy; and

(2) recurring episodes of disturbance of consciousness of uncertain cause; shall be assessed as unfit.
(c) Applicants with an established history or clinical diagnosis of:
   (1) epilepsy without recurrence after age 5;
   (2) epilepsy without recurrence and off all treatment for more than 10 years;
   (3) epileptiform EEG abnormalities and focal slow waves;
   (4) progressive or non-progressive disease of the nervous system;
   (5) a single episode of disturbance of consciousness of uncertain cause;
   (6) loss of consciousness after head injury;
   (7) penetrating brain injury; and
   (8) spinal or peripheral nerve injury;
   shall undergo further evaluation before a fit assessment can be considered. Applicants for a Class 1 medical certificate shall be referred to the DCA. Fitness of Class 2 or Class 3 applicants shall be assessed in consultation with the DCA

**MED.B.070 Visual System**

(a) Applicants shall not possess any abnormality of the function of the eyes or their adnexa or any active pathological condition, congenital or acquired, acute or chronic, or any sequelae of eye surgery or trauma, which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Examination
   (1) For a Class 1 medical certificate:
      (i) a comprehensive eye examination shall form part of the initial examination and be undertaken periodically depending on the refraction and the functional performance of the eye; and
      (ii) a routine eye examination shall form part of all revalidation and renewal examinations.

   (2) For a Class 2 or Class 3 medical certificate:
      (i) a routine eye examination shall form part of the initial and all revalidation and renewal examinations; and
      (ii) a comprehensive eye examination shall be undertaken when clinically indicated.

(c) Distant visual acuity, with or without correction, shall be:
   (1) in the case of Class 1 medical certificates, 6/9 (0.7) or better in each eye separately and visual acuity with both eyes shall be 6/6 (1.0) or better;
   (2) in the case of an applicants for an initial Class 1 medical certificate with
substandard vision in one eye shall be assessed as unfit. At revalidation, applicants with acquired substandard vision in one eye shall be referred to the DCA and may be assessed as fit if it is unlikely to interfere with safe exercise of the license held.

(3) in the case of Class 2 medical certificates, 6/12 (0,5) or better in each eye separately and visual acuity with both eyes shall be 6/9 (0,7) or better. An applicant with substandard vision in one eye may be assessed as fit in consultation with the DCA subject to satisfactory ophthalmic assessment; and

(4) in the case of Class 3 medical certificates, 6/9 (0,7) or better in each eye separately and visual acuity with both eyes shall be 6/6 (1,0) or better. An applicant with substandard vision in one eye may be assessed as fit in consultation with the DCA subject to satisfactory ophthalmic assessment. Applicants for an initial Class 3 medical certificate whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report and every five years thereafter.

(d) An applicant shall be able to read an N5 chart (or equivalent) at 30-50 cm and an N14 chart (or equivalent) at 100 cm, with correction, if prescribed.

(e) Applicants for a Class 1 medical certificate shall be required to have normal fields of vision and normal binocular function.

(f) Applicants who have undergone eye surgery may be assessed as fit subject to satisfactory ophthalmic evaluation.

(g) Applicants with a clinical diagnosis of keratoconus may be assessed as fit subject to a satisfactory examination by an ophthalmologist. Applicants for a Class 1 medical certificate shall be referred to the DCA.

(h) Applicants with:
   (1) astigmatism; and
   (2) anisometropia; may be assessed as fit subject to satisfactory ophthalmic evaluation.

(i) Applicants with diplopia shall be assessed as unfit.

(j) Spectacles and contact lenses. If satisfactory visual function is achieved only with the use of correction:
   (1) (i) for distant vision, spectacles or contact lenses shall be worn whilst exercising the privileges of the applicable license(s); and

   (ii) for near vision, a pair of spectacles for near use shall be kept available during the exercise of the privileges of the license;

   (2) a spare set of similarly correcting spectacles shall be readily available for
immediate use whilst exercising the privileges of the applicable license(s);

(3) the correction shall provide optimal visual function, be well-tolerated and suitable for aviation purposes;

(4) if contact lenses are worn, they shall be for distant vision, monofocal, non-tinted and well tolerated;

(5) applicants with a large refractive error shall use contact lenses or high-index spectacle lenses;

(6) no more than one pair of spectacles shall be used to meet the visual requirements; and

(7) orthokeratological lenses shall not be used.

**MED.B.075 Colour vision**

(a) Applicants shall be required to demonstrate the ability to perceive readily the colours that are necessary for the safe performance of duties.

(b) Examination

(1) Applicants shall pass the Ishihara test for the initial issue of a medical certificate.

(2) Applicants who fail to pass in the Ishihara test shall undergo further colour perception testing to establish whether they are colour safe.

(c) In the case of Class 1 medical certificates, applicants shall have normal perception of colours or be colour safe. Applicants who fail further colour perception testing shall be assessed as unfit. Applicants for a Class 1 medical certificate shall be referred to the DCA.

(d) In the case of Class 2 medical certificates, when the applicant does not have satisfactory perception of colours, his flying privileges shall be limited to daytime only.

(e) In the case of Class 3 medical certificates, when the applicant does not have satisfactory perception of colours, his privileges shall be limited to daytime only.

**MED.B.080 Otorhino-laryngology**

(a) Applicants shall not possess any abnormality of the function of the ears, nose, sinuses or throat, including oral cavity, teeth and larynx, or any active pathological condition, congenital or acquired, acute or chronic, or any sequelae of surgery or trauma which is likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) Hearing shall be satisfactory for the safe exercise of the privileges of the applicable license(s).
(c) Examination
(1) Hearing shall be tested at all examinations.
   (i) In the case of Class 1 medical certificates and Class 2 medical certificates, when an instrument rating is to be added to the license held, hearing shall be tested with pure tone audiometry at the initial examination and, at subsequent revalidation or renewal examinations, every 5 years until the age 40 and every 2 years thereafter. Applicants for Class 3 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every 4 years up to the age of 40 years, and thereafter not less than once every 2 years.

   (ii) When tested on a pure-tone audiometer, initial applicants shall not have a hearing loss of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, in either ear separately. Applicants for revalidation or renewal, with greater hearing loss shall demonstrate satisfactory functional hearing ability.

   (iii) Applicants with hypoacusis shall demonstrate satisfactory functional hearing ability.

(2) A comprehensive ear, nose and throat examination shall be undertaken for the initial issue of a Class 1, Class 2 or Class 3 medical certificate and periodically thereafter when clinically indicated.

(d) Applicants for a Class 1 or Class 3 medical certificate with:
(1) an active pathological process, acute or chronic, of the internal or middle ear;

(2) unhealed perforation or dysfunction of the tympanic membrane(s);

(3) disturbance of vestibular function;

(4) significant restriction of the nasal passages;

(5) sinus dysfunction;

(6) significant malformation or significant, acute or chronic infection of the oral cavity or upper respiratory tract; and

(7) significant disorder of speech or voice; shall undergo further medical examination and assessment to establish that the condition does not interfere with the safe exercise of the privileges of the license held.

(e) Aero-medical assessment:
(1) applicants for a Class 1 medical certificate with the disturbance of vestibular function shall be referred to the DCA; and
(2) fitness of Class 2 or Class 3 applicants with the disturbance of vestibular function shall be assessed in consultation with the DCA.

MED.B.085 Dermatology
Applicants shall have no established dermatological condition likely to interfere with the safe exercise of the privileges of the applicable license(s) held.

MED.B.090 Oncology
(a) Applicants shall have no established primary or secondary malignant disease likely to interfere with the safe exercise of the privileges of the applicable license(s).

(b) After treatment for malignant disease, applicants shall undergo satisfactory oncological evaluation before a fit assessment can be made. Class 1 applicant shall be referred to the DCA. Fitness of Class 2 or Class 3 applicant shall be assessed in consultation with the DCA.

(c) Applicants with an established history or clinical diagnosis of intracerebral malignant tumour shall be assessed as unfit.
PART C

MEDICAL FITNESS REQUIREMENTS FOR CABIN CREW MEMBER

SECTION 1 – General

MED.C.001 General
No person shall act as a cabin crew member unless he fulfills the requirement as specified in these Directives.

MED.C.005 General medical assessments
(a) Cabin crew member and applicant for a cabin crew attestation shall undergo general medical assessments to verify that they are free from any physical or mental illness which might lead to incapacitation or an inability to perform their assigned safety duties and responsibilities.

(b) Each cabin crew member shall undergo a general medical assessment before being first assigned to duties on an aircraft and after that at intervals of maximum 60 months.

(c) General medical assessments shall be conducted by the CMA, ME or GMP.

SECTION 2 – Requirements for General Medical Assessment

MED.C.020 General
Cabin crew members shall be free from any:
(a) abnormality, congenital or acquired;
(b) active, latent, acute or chronic disease or disability;
(c) wound, injury or sequelae from operation; and
(d) effect or side effect of any prescribed or non-prescribed therapeutic, diagnostic or preventive medication taken that would entail a degree of functional incapacity which might lead to incapacitation or an inability to discharge their safety duties and responsibilities.

MED.C.025 Content of General medical assessments
(a) An initial general medical assessment shall include at least:
   (1) an assessment of the cabin crew member's medical history; and
   (2) a clinical examination of the following:
      (i) cardiovascular system;
      (ii) respiratory system;
      (iii) musculoskeletal system;
(iv) otorhino-laryngology;

(v) visual system; and

(vi) colour vision.

(b) Each subsequent medical re-assessment shall include:
(1) an assessment of the cabin crew member’s medical history; and

(2) a clinical examination if deemed necessary in accordance with medical best practice.

(c) For the purpose of paragraphs (a) and (b) above, in case of any doubt or if clinically indicated, a cabin crew member’s general medical assessment shall also include any additional medical examination, test or investigation that are considered necessary by the CMA, ME or GMP.

SECTION 3 – Additional Requirements

MED.C.030 Cabin crew medical report
(a) After completion of each general medical assessment, cabin crew member:
(1) shall be provided with a cabin crew medical report by the CMA, ME or GMP; and

(2) shall provide the related information, or a copy of their cabin crew medical report to the operator(s) employing their services.

(b) Cabin crew medical report
A cabin crew medical report shall indicate the date of the medical assessment, whether the cabin crew member has been assessed fit or unfit, the date of the next required general medical assessment and, if applicable, any limitation(s). Any other elements shall be subjected to medical confidentiality in accordance with MED.A.015 of these Directives.

(c) The cabin crew medical report shall be valid for a period not exceeding 60 months.

SECTION 4 – The applicant for a cabin crew member attestation
Sections 2 and 3 shall apply mutatis mutandis to the applicant for a cabin crew member attestation.
PART D

MEDICAL EXAMINER AND GENERAL MEDICAL PRACTITIONER

SECTION 1 – Medical Examiners (“ME”)

MED.D.001 Privileges
(a) The privileges of a ME are to conduct medical examinations and assessments and to issue, revalidate and renew three Classes of medical certificates.

(b) The scope of the privileges of the ME, and any condition thereof, shall be specified in the certificate.

(c) ME shall not undertake aero-medical examinations and assessments in Malaysia, unless they have:
   (1) been approved by the DCA to exercise their professional activities as a specialised doctor at the place of practice; and
   (2) received a briefing from the CMA.

MED.D.005 Application
(a) Application for a certificate as a ME shall be made in a form and manner as may be determined by the Director General accompanied by the prescribed fee for the application.

(b) Applicants for a ME certificate shall provide the DCA with:
   (1) personal details and professional address;
   (2) documentation demonstrating that they comply with the requirements established in MED.D.010 of these Directives, including a certificate of completion of the training course in aviation medicine appropriate to the privileges they apply for; and
   (3) a written declaration that the ME will issue medical certificates on the basis of the requirements of these Directives;

(c) the ME application process is as per Appendix A.

MED.D.010 Requirements for the issue of a ME certificate
Applicants for a ME certificate shall:
(a) be fully qualified and licensed for the practice of medicine and hold a Certificate of Completion of specialist training;

(b) have undertaken a basic training course in aviation medicine and have working experience in an aviation environment; and

(c) demonstrate to the DCA that they:
   (1) have adequate facilities, procedures, documentation and functioning equipment suitable for aero-medical examinations; and
(2) have in place the necessary procedures and conditions to ensure medical confidentiality.

**MED.D.020 Training courses in aviation medicine**

(a) Training courses in aviation medicine shall be approved by the DCA.

(b) Except in the case of refresher training, the courses shall be concluded by a written examination on the subjects included in the course content.

(c) The organisation providing the course shall issue a certificate of completion to applicants when they have obtained a pass in the examination.

**MED.D.025 Changes to the ME certificate**

MEs shall notify the DCA of the following changes which could affect their certificate:

(a) the ME is subject to disciplinary proceedings or investigation by a medical regulatory body; and

(b) there is a change of aero-medical ME’s practice location.

**MED.D.030 Validity of ME certificates**

A ME certificate shall be valid for a period not exceeding 3 years. It may be renewed subject to the holder:

(a) continuing to fulfill the general conditions required for medical practice and maintaining registration as a medical practitioner according to national law;

(b) undertaking refresher training in aviation medicine within the last 3 years;

(c) having performed at least 10 aero-medical examinations every year;

(d) remaining in compliance with the terms of their certificate; and

(e) exercising their privileges in accordance with these Directives.

**SECTION 2 – General Medical Practitioners (“GMP”)**

**MED.D.040 Requirements for GMP**

No person shall act as a general medical practitioner unless he is a medical practitioner under Medical Act 1971 [Act 50].
Appendix A

ME APPLICATION PROCESS

START

Application received by DCA

Assessment by CMA

Not Acceptable

Acceptable

Assessment by Medical Board

Not Acceptable

Acceptable

Accepted by Director of Flight Operations – Class 1 and Class 2
Accepted by Director of Air Traffic inspectorate – Class 3

Approval by Director General

END